



**S.P.B. PATEL  
ENGINEERING COLLEGE**  
SAFFRONY INSTITUTE OF TECHNOLOGY CAMPUS

Near Shanku's Water Park,  
Ahmedabad – Mehsana Highway,  
Linch, Mehsana – 384435  
Email: info@saffrony.ac.in  
Web: www.saffrony.ac.in  
Phone : (02762) 285721



**CYCLE 1  
NAAC Accreditation 2023**

# ACADEMIC YEAR 2022-23

*Submitted to*



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**NATIONAL ASSESSMENT AND ACCREDITATION COUNCIL**

# S.P.B. PATEL ENGINEERING COLLEGE

## SUPPORTING DOCUMENTS

### 1.2.1

Name of Certificate/ Value added course	Course Code (if any)	Year of offering/study	Period (from date - to date)	Duration of course	Number of students enrolled in the year	Number of Students completing the course in the year
<b>2022-23</b>						
Professional Life Skill Development	NA	2022-23	July 22 - December22	56 Hours	163	163
Engineering Ethics and Professional Responsibility	NA	2022-23	Feb-23	33 Hours	90	90
ENTREPRENEURSHIP AND INNOVATION COURSE	NA	2022-23	Mar-23	35 Hours	110	110
Project Management	NA	2022-23	Oct-22	30 Hours	118	118
Robotics and Automation Course	NA	2022-23	Sep-22	31 Hours	90	90
Soft Skills for Engineers Course Report	NA	2022-23	Dec-22	33 Hours	149	149

# **S.P.B. Patel Engineering College**

## **NOTICE**

**Date: 27th June 2022**

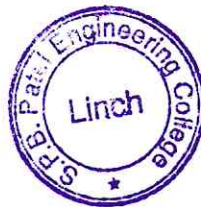
All students of the 2019 Batch of Degree Engineering are hereby informed that, to bridge the gap between academia and industry, the Institute will organize a Professional & Life Skill Development Course between July 2022 and December 2022.



Principal

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## **Professional and Life Skills Development (PLSD)**

**S.P.B. Patel Engineering College**

**Year of Offering/Study:** 2022-23

**Period:** July 2022 - December 2022

**Duration of Course:** 56 Hours

**Number of Students Enrolled:** 163

**Number of Students Completing the Course:** 163

### **Introduction:**

In the academic year 2022-23, S.P.B. Patel Engineering College embarked on a transformative journey with the implementation of the Professional and Life Skills Development (PLSD) program. Recognizing the crucial role of soft skills in shaping successful careers, the college designed this program to equip students with essential competencies for thriving in the dynamic corporate landscape.

### **Program Overview:**

The PLSD program spanned from July 2022 to December 2022, encompassing a rigorous curriculum aimed at deepening students' understanding of soft and life skills while emphasizing practical application. With a total duration of 56 hours, the program adopted an experiential approach to learning, incorporating interactive sessions, real-life problem-solving assignments, psychometric testing, and personalized counseling.

### **Curriculum Highlights:**

The PLSD curriculum was meticulously structured to nurture well-rounded, resilient, and adaptable individuals. Key modules included:

**1. Teamwork and Leadership:** This module focused on fostering effective collaboration and interpersonal skills among students. Through thorough discussions and assessments, teams were carefully formed, leveraging each member's strengths and weaknesses for optimal performance.

**2. Art of Understanding Others:** Students delved into the nuances of empathetic communication and active listening, honing their abilities to comprehend and connect with diverse perspectives.

**3. Humility and Gratitude:** Emphasizing the importance of humility and gratitude in personal and professional growth, this module encouraged students to cultivate a mindset of appreciation and openness.

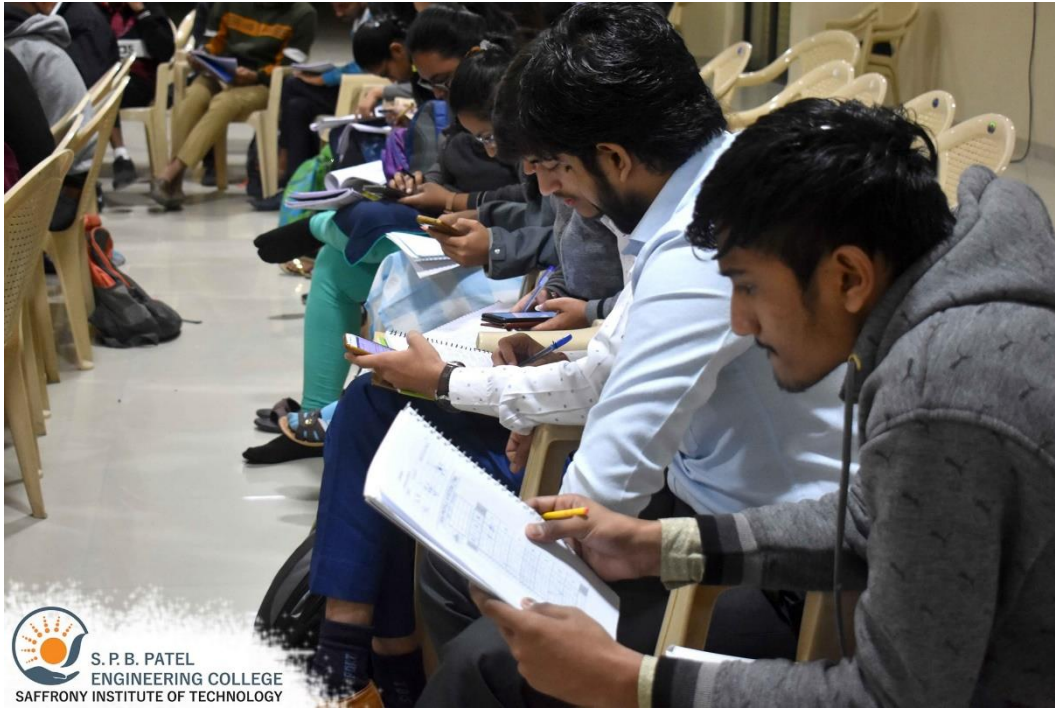
**4. Stress Management and Anger Management:** Equipping students with essential coping mechanisms, this module provided practical techniques for managing stress and channeling anger constructively, crucial skills for navigating the complexities of modern life.

**Achievements and Impact:**

With a total of 163 students enrolled and completing the course, the PLSD program witnessed full participation and engagement from the student body. Feedback from participants highlighted the tangible benefits gained, including enhanced communication skills, heightened self-awareness, and improved teamwork capabilities. Students reported feeling more confident and prepared to tackle challenges in both academic and professional settings.



**Photographs:**









*W. Patel*





## S.P.B. Patel Engineering College

### NOTICE

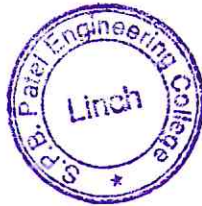
**Date: 27th January 2023**

All Degree Engineering students are hereby informed that the Institute will organize a session on Engineering Ethics and Professional Responsibility in February 2023. Interested students should provide their names to their respective departments.

  
Principal

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February 2022

# Workshop on

Engineering Ethics and Professional  
Responsibility

Conducted by:

**S.P.B. Patel Engineering College**



**S.P.B. PATEL  
ENGINEERING COLLEGE**

SAFFRONY INSTITUTE OF TECHNOLOGY CAMPUS

## **Report on**

## **Workshop on Engineering Ethics and Professional Responsibility**

## **S.P.B. Patel Engineering College**

### **Course Overview:**

The Engineering Ethics and Professional Responsibility workshop conducted by S.P.B. Patel Engineering College aimed at instilling a deep understanding of ethical principles within engineering professionals. The course spanned 33 hours – 3 hours a week, and took place in February - March 2022, attracting active participation from 123 students.

### **Workshop Highlights:**

The workshop was conducted by Dr. Shailesh Patel who unfolded a dynamic exploration of the intricate intersection between engineering, ethics, and professional responsibility. Participants delved into the profound realm of ethical decision-making, guided by real-world examples that showcased the tangible impact of engineering innovation on society. Interactive sessions facilitated lively discussions, allowing students to grapple with ethical dilemmas and apply theoretical principles to practical scenarios.

Some of the major discussion points of the workshop were as follows:

#### **1. Introduction to Engineering Ethics:**

- Definition and significance of engineering ethics.
- The crucial role of engineers in shaping society and impacting daily lives.

#### **2. Understanding Innovation:**

- Emphasizing the responsibility engineers hold in finding innovative solutions to societal challenges.
- Real-life examples showcasing the impact of engineering innovation.

#### **3. Ethics in Engineering Practice:**

- The importance of integrity and honesty in the engineering profession.
- Examination of the obligations of engineers to society, clients, and the profession.

#### **4. Engineering Code of Ethics:**

- Definition and purpose of the engineering code of ethics.
- Key principles such as prioritizing public safety, competence, truthful communication, and honorable conduct.

#### **5. Importance of Engineering Codes of Ethics:**

- Highlighting the potential consequences of unethical engineering practices.
- Emphasis on the role of codes of ethics in maintaining public trust in the engineering profession.

#### **6. Maintaining Public Safety:**

- The paramount role of engineers in ensuring public safety.
- Adhering to standard materials and methods to minimize risks.

#### **7. Integrity and Honesty:**

- The obligation of engineers to be honest in dealings with clients, employers, and the public.
- Avoidance of fraudulent or deceptive activities.

#### **8. Building Public Confidence:**

- How adherence to engineering ethics codes builds public confidence.
- The impact of ethical conduct on related industries such as construction and manufacturing.

#### **9. Protecting Clients and Employers:**

- Ensuring the confidentiality of client information.



- Non-disclosure of employer's information without explicit permission.

### **10. Ethical Decision-making:**

- Guidance on making ethical decisions in challenging situations.
- Balancing moral values and promoting social welfare.

### **Key Takeaways:**

The outcomes of the Engineering Ethics and Professional Responsibility course S.P.B. Patel Engineering College were profound and are as follows:

- Heightened Ethical Awareness
- Improved Decision-Making Skills
- Commitment to Code Adherence
- Strengthened Public Safety Priority
- Cultivated Professional Integrity
- Practical Application Skills
- Enhanced Industry Relevance
- Developed Collaborative Problem-Solving
- Emphasis on Continuous Learning
- Focus on Public Trust Building

### **Conclusion:**

The Engineering Ethics and Professional Responsibility workshop successfully equipped 123 participants with a comprehensive understanding of ethical principles in the engineering profession. By emphasizing the significance of adherence to codes of ethics, the workshop aimed to foster a culture of responsible and ethical engineering practice among the participants.

**Photographs:**



## ATTENDENCE OF STUDENTS

### List of the students Participated:

Sr.No	BR_NAME	Enrolment number	Name
1	MECHANICAL ENGINEERING	200390119502	jeet pratapbhai pomal
2	COMPUTER ENGINEERING	190390107055	SIDDHPURA MILAN JAYESHBHAI
3	COMPUTER ENGINEERING	190390107032	PATEL DEV BIPINBHAI
4	MECHANICAL ENGINEERING	190390119013	SHARMA RONIT RAMNIWAS
5	MECHANICAL ENGINEERING	200390119503	DABHI JENISH PIYUSHBHAI
6	COMPUTER ENGINEERING	190390107058	THAKAR JANVI DINESHBHAI
7	COMPUTER ENGINEERING	190390107033	PATEL DEVKUMAR BRIJESHKUMAR
8	MECHANICAL ENGINEERING	200390119505	SHARMA TITHI NAVINKUMAR
9	COMPUTER ENGINEERING	190390107057	SUKHADIYA HEMANG ATULKUMAR
10	COMPUTER ENGINEERING	190390107037	PATEL JAY ASHWINBHAI
11	MECHANICAL ENGINEERING	200390119506	Pratham Kirti Jain
12	COMPUTER ENGINEERING	190390107038	PATEL JAYKUMAR DINESHBHAI
13	MECHANICAL ENGINEERING	190390119014	SUTHAR DHAVALKUMAR AMRABHAI
14	COMPUTER ENGINEERING	190390107002	CHAUDHARY DASHARATHBHAI TRIKAMABHAI
15	MECHANICAL ENGINEERING	190390119015	SUTHAR SHIVAM MUKESHKUMAR
16	MECHANICAL ENGINEERING	190390119016	SUTHAR SHUBHAM MUKESHKUMAR
17	COMPUTER ENGINEERING	190390107009	GOR KHUSHIBEN MINESHKUMAR
18	COMPUTER ENGINEERING	190390107044	PATEL SUHANIBEN ASHOKBHAI
19	COMPUTER ENGINEERING	190390107010	HANSALIA DEVKI PRAKASHBHAI
20	COMPUTER ENGINEERING	190390107045	PATEL YASHKUMAR JAYESHBHAI
21	COMPUTER ENGINEERING	190390107011	JADLIWALA HUZEFA ISMAIL
22	MECHANICAL ENGINEERING	200390119504	PATEL SMIT SURESHBHAI
23	COMPUTER ENGINEERING	190390107056	SUKHADIYA AAGAM PARESHBHAI
24	COMPUTER ENGINEERING	190390107034	PATEL DHARITRI MANVIRKUMAR
25	COMPUTER ENGINEERING	190390107013	JASANI VITRAG MITESHBHAI
26	COMPUTER ENGINEERING	190390107047	PRADHAN SHANKHADEEP NITAI
27	COMPUTER ENGINEERING	190390107048	PRAJAPATI MIREN ASHOKKUMAR
28	COMPUTER ENGINEERING	190390107014	JOSHI CHIRAGKUMAR PRADIPBHAI
29	COMPUTER ENGINEERING	190390107039	PATEL KRITKUMAR KANUBHAI
30	COMPUTER ENGINEERING	190390107001	BHAVSAR DHRUVI ANILKUMAR
31	COMPUTER ENGINEERING	190390107042	PATEL RIKEN NAINESHKUMAR
32	COMPUTER ENGINEERING	190390107043	PATEL SHREYASHKUMAR MAHENDRABHAI
33	COMPUTER ENGINEERING	190390107018	MANE HRUSHIKESH RAGHUNATH
34	COMPUTER ENGINEERING	190390107052	SAIYAD SHAHRUKH SADIK HUSEN
35	COMPUTER ENGINEERING	200390107502	GAJJAR SHRUTI RAJESH
36	COMPUTER ENGINEERING	190390107040	PATEL LAVKUMAR HEMANTBHAI
37	COMPUTER ENGINEERING	190390107020	SWAGATIKA MOHANTY
38	COMPUTER ENGINEERING	190390107054	SHAH NISHANT SANJAY
39	COMPUTER ENGINEERING	190390107041	PATEL NIRALI DINESHKUMAR
40	COMPUTER ENGINEERING	190390107017	LIMBACHIA JIMMY NIMESHBHAI

Sr.No	BR_NAME	Enrolment number	Name
41	COMPUTER ENGINEERING	190390107051	RAVAL RUSHIKUMAR BHARATBHAI
42	COMPUTER ENGINEERING	190390107049	PRAJAPATI MITKUMAR KAMLESHBHAI
43	COMPUTER ENGINEERING	190390107015	KAMANI PREMALKUMAR ASHOKBHAI
44	COMPUTER ENGINEERING	200390107505	Dave Manav Sanjay
45	COMPUTER ENGINEERING	190390107003	CHAUDHARY KHUVENDRASINGH SURENDRASINGH
46	COMPUTER ENGINEERING	190390107062	THAKUR JESAL DEVRAJSINGH
47	COMPUTER ENGINEERING	190390107023	SURBHI PANSURIYA
48	COMPUTER ENGINEERING	200390107506	NAYAK TIRTHA SAMIR
49	COMPUTER ENGINEERING	190390107004	CHAVDA RAHUL KISHORBHAI
50	COMPUTER ENGINEERING	190390107063	TIMBADIYA CHHAYA DINESHBHAI
51	COMPUTER ENGINEERING	190390107024	PATEL ABHIK DUSHYANTBHAI
52	MECHANICAL ENGINEERING	190390119002	BAROT SHASHANK RANJITBHAI
53	COMPUTER ENGINEERING	200390107511	Patel Mihir Vishnubhai
54	COMPUTER ENGINEERING	190390107030	PATEL DEEP MUKESHBHAI
55	MECHANICAL ENGINEERING	190390119011	PRAJAPATI HARSHIT DHANJIBHAI
56	COMPUTER ENGINEERING	200390107509	PATEL JAIMEEN NIKUMBHAI
57	COMPUTER ENGINEERING	190390107008	GAJJAR HARSH ASHVINBHAI
58	COMPUTER ENGINEERING	190390107066	VEKARIYA AGNESH RAMESHBHAI
59	COMPUTER ENGINEERING	190390107027	PATEL BHARGAVKUMAR SHAILESHBHAI
60	MECHANICAL ENGINEERING	190390119007	KANSARA HARIKRUSHNA PRAKASHCHANDRA
61	COMPUTER ENGINEERING	200390107510	SOLANKI FALGUNIBEN DILIPBHAI
62	COMPUTER ENGINEERING	190390107028	PATEL BIREN SURESHKUMAR
63	COMPUTER ENGINEERING	190390107067	YADAV SATYAM NISHA YADAV
64	MECHANICAL ENGINEERING	190390119010	PATEL NIMABEN ANILBHAI
65	COMPUTER ENGINEERING	200390107504	Dhruvi Patel
66	COMPUTER ENGINEERING	190390107060	THAKKAR VIBHA MAHESHKUMAR
67	COMPUTER ENGINEERING	190390107022	PANSURIYA PARASKUMAR SURESHBHAI
68	COMPUTER ENGINEERING	190390107016	KANJARIYA PRADIP ASHOKBHAI
69	COMPUTER ENGINEERING	190390107050	PRAJAPATI RIYA PINKESHKUMAR
70	COMPUTER ENGINEERING	200390107508	DIWAN SUJANBANU IMRANSHA
71	COMPUTER ENGINEERING	190390107007	DAVE SOHAM VIJAYKUMAR
72	COMPUTER ENGINEERING	190390107065	VARIYA ABHIRAJ SHIRISHBHAI
73	COMPUTER ENGINEERING	190390107026	PATEL ARYAN BAKULESH
74	MECHANICAL ENGINEERING	190390119004	CHAUHAN HARSHITSINH BHUPENDRASINH
75	COMPUTER ENGINEERING	200390107503	YASH SARADVA
76	COMPUTER ENGINEERING	190390107059	THAKKAR UMANG KALPESHKUMAR
77	COMPUTER ENGINEERING	190390107021	OZA PARTH RAJESHBHAI
78	COMPUTER ENGINEERING	200390107501	Patel Dhruv Dhanpalbhai
79	COMPUTER ENGINEERING	190390107019	MANSURI AAYESHA ILYASBHAI
80	COMPUTER ENGINEERING	190390107053	SHAH NIR DILIPBHAI
81	COMPUTER ENGINEERING	200390107507	CHAUHAN SHIVANIBEN SUNILKUMAR
82	COMPUTER ENGINEERING	190390107006	CHOVATIYA VISHAL DHARMENDRABHAI



<b>Sr.No</b>	<b>BR_NAME</b>	<b>Enrolment number</b>	<b>Name</b>
83	COMPUTER ENGINEERING	190390107025	PATEL ABHISHEK MAHESHBHAI
84	COMPUTER ENGINEERING	190390107064	TRIVEDI MAITRI HIRENBHAI
85	MECHANICAL ENGINEERING	190390119003	BHUVA GAURANG KUMAR JAYESHBHAI
86	COMPUTER ENGINEERING	190390107046	PATHAN FIZABANU YUSUFMIYA
87	COMPUTER ENGINEERING	190390107012	JAIN KAJAL MANOJKUMAR
88	MECHANICAL ENGINEERING	200390119501	BHATT NISHYANK PRANTHESH
89	COMPUTER ENGINEERING	190390107031	PATEL DEV BHUPENDRABHAI
90	MECHANICAL ENGINEERING	190390119012	SENGAL BHAUMIKKUMAR RAMESHBHAI



**S.P.B. Patel Engineering College**

**NOTICE**

**Date: 27th February 2023**

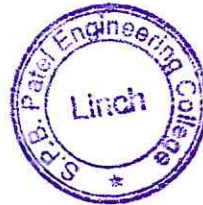
All Degree Engineering students are hereby informed that, to bridge the gap between academia and industry, the Institute will organize an Entrepreneurship and Innovation Course in March 2023.

Interested students should provide their names to their respective departments.

  
Principal

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## Report on ENTREPRENEURSHIP AND INNOVATION COURSE

### Saffrony Institute of Technology

#### Course Overview

The Entrepreneurship and Innovation Course conducted by Saffrony Institute of Technology in Dec 2022 was a comprehensive program designed to instill entrepreneurial skills and foster innovation among engineering students.

The course aimed to provide students with a solid foundation in entrepreneurship, equipping them with the knowledge and skills necessary to thrive in the dynamic world of technology and business.

#### Expert Facilitator

The course was expertly conducted by Mr. Dhiren Parekh, a seasoned professional with extensive experience in entrepreneurship and innovation. Mr. Dhiren Parekh brought a wealth of knowledge and practical insights to the course, enriching the learning experience for the participants.

#### Participation Statistics

A total of 153 students enthusiastically participated in the course, highlighting the significant interest among engineering students in acquiring entrepreneurial skills. The diverse group of participants added to the richness of discussions and collaborative learning during the program.

#### Course Overview

The Entrepreneurship and Innovation Course spanned over 35 hours, 2 lectures a week, providing students with an immersive and in-depth learning experience. The course structure was carefully designed to cover key topics, including ideation, business planning, market analysis, funding strategies, and innovation methodologies.

##### 1. Introduction to Entrepreneurship

- Definition of entrepreneurship
- Importance of entrepreneurship in today's world
- Basic principles of entrepreneurship

##### 2. Understanding Innovation

- What is innovation?
- Types of innovation



- Real-life examples of successful innovations

### 3. Idea Generation and Creativity

- Techniques for creative thinking
- Brainstorming sessions
- Cultivating innovative ideas

### 4. Business Model Basics

- Introduction to business models
- Key components of a business model
- Examples of successful business models

### 5. Developing a Business Plan

- Components of a business plan
- Market research and analysis
- Financial planning and projections

### 6. Risk Management

- Identifying potential risks in entrepreneurship
- Strategies for risk mitigation

### 7. Leadership and Team Building

- Leadership skills for entrepreneurs
- Importance of effective teamwork
- Team-building exercises

### 8. Pitching and Communication Skills

- Crafting an effective pitch
- Communication skills for entrepreneurs
- Pitching practice sessions

### 9. Entrepreneurial Ethics and Social Responsibility

- Ethical considerations in entrepreneurship
- Social responsibility of entrepreneurs

### 10. Final Project: Business Idea Presentation

- Students present their business ideas
- Feedback and constructive critique

## Outcomes

Upon completion of the Entrepreneurship and Innovation Course, participants are expected to have achieved the following outcomes:

- **Comprehensive Understanding:** Attain a clear and comprehensive understanding of the fundamental principles and significance of entrepreneurship.

- **Innovative Mindset:** Cultivate a creative and innovative mindset, enabling participants to generate and nurture novel ideas.
- **Proficient Business Planning:** Demonstrate proficiency in developing robust business plans, incorporating thorough market analysis and financial projections.
- **Effective Risk Management:** Identify potential risks associated with entrepreneurial endeavors and apply effective strategies for risk management.
- **Leadership and Team Collaboration:** Enhance leadership skills and recognize the critical importance of effective teamwork, preparing participants for collaborative ventures in the entrepreneurial landscape.

## **Conclusion**

In conclusion, the Entrepreneurship and Innovation Course conducted by Saffrony Institute of Technology in Dec 2022 has been a resounding success, engaging and benefiting a total of 153 students.

The course accomplished its objectives by providing a comprehensive understanding of entrepreneurship, fostering innovative thinking, and imparting practical business skills. With an emphasis on risk management proficiency, leadership development, and effective teamwork, the course has equipped students with the tools and mindset essential for success in the dynamic landscape of entrepreneurship.

The robust participation and positive outcomes underscore the program's effectiveness in nurturing the entrepreneurial spirit among the student community.

**Photographs:**



## ATTENDENCE SHEET OF STUDENTS

### List of Students Participated:

Sr.No	BR_NAME	Enrolment number	Name
1	MECHANICAL ENGINEERING	200390119502	jeet pratapbhai pomal
2	INFORMATION TECHNOLOGY	190390116039	PRAJAPATI YASH GANESHBHAI
3	INFORMATION TECHNOLOGY	190390116014	PATEL AKSHAYKUMAR PANKAJBHAI
4	COMPUTER ENGINEERING	190390107055	SIDDHPURA MILAN JAYESHBHAI
5	COMPUTER ENGINEERING	190390107032	PATEL DEV BIPINBHAI
6	MECHANICAL ENGINEERING	190390119013	SHARMA RONIT RAMNIWAS
7	MECHANICAL ENGINEERING	200390119503	DABHI JENISH PIYUSHBHAI
8	INFORMATION TECHNOLOGY	190390116015	PATEL CHARMI KALIDAS
9	COMPUTER ENGINEERING	190390107058	THAKAR JANVI DINESHBHAI
10	COMPUTER ENGINEERING	190390107033	PATEL DEVKUMAR BRIJESHKUMAR
11	INFORMATION TECHNOLOGY	190390116045	SHETH KRISHA NILESH
12	MECHANICAL ENGINEERING	200390119505	SHARMA TITHI NAVINKUMAR
13	COMPUTER ENGINEERING	190390107057	SUKHADIYA HEMANG ATULKUMAR
14	INFORMATION TECHNOLOGY	190390116028	PATEL RUTVIK RAJESHBHAI
15	COMPUTER ENGINEERING	190390107037	PATEL JAY ASHWINBHAI
16	CIVIL ENGINEERING	190390106001	GUPTA KUNAL RAKESHBHAI
17	MECHANICAL ENGINEERING	200390119506	Pratham Kirti Jain
18	INFORMATION TECHNOLOGY	190390116040	RAJPUT SHIVAM RAMKUMAR
19	INFORMATION TECHNOLOGY	190390116030	PATEL SUJAL KAMLESHBHAI
20	COMPUTER ENGINEERING	190390107038	PATEL JAYKUMAR DINESHBHAI
21	CIVIL ENGINEERING	190390106002	KALAVADIYA PRINCE PARESHBHAI
22	MECHANICAL ENGINEERING	190390119014	SUTHAR DHAVALKUMAR AMRABHAI
23	INFORMATION TECHNOLOGY	190390116033	PATHAK HARDIK SHASHIKANT
24	INFORMATION TECHNOLOGY	190390116036	PRAJAPATI PRATIK KAMLESHKUMAR
25	COMPUTER ENGINEERING	190390107002	CHAUDHARY DASHARATHBHAI TRIKAMABHAI
26	MECHANICAL ENGINEERING	190390119015	SUTHAR SHIVAM MUKESHKUMAR
27	MECHANICAL ENGINEERING	190390119016	SUTHAR SHUBHAM MUKESHKUMAR
28	COMPUTER ENGINEERING	190390107009	GOR KHUSHIBEN MINESHKUMAR
29	INFORMATION TECHNOLOGY	190390116035	PRAJAPATI KIRTAN RAJUBHAI
30	INFORMATION TECHNOLOGY	190390116034	PRAJAPATI DIXESH SHAILESHKUMAR
31	INFORMATION TECHNOLOGY	190390116037	PRAJAPATI SACHINKUMAR RAMESHBHAI
32	CIVIL ENGINEERING	190390106003	TAVIYA RAVINDRAKUMAR BHARATBHAI
33	INFORMATION TECHNOLOGY	190390116038	PRAJAPATI VAIDEHI AMITKUMAR
34	COMPUTER ENGINEERING	190390107044	PATEL SUHANIBEN ASHOKBHAI
35	COMPUTER ENGINEERING	190390107010	HANSALIA DEVKI PRAKASHBHAI
36	AUTOMOBILE ENGINEERING	140390102016	MIHIR THAKKAR
37	COMPUTER ENGINEERING	190390107045	PATEL YASHKUMAR JAYESHBHAI
38	COMPUTER ENGINEERING	190390107011	JADLIWALA HUZEFA ISMAIL
39	INFORMATION TECHNOLOGY	190390116024	PATEL NEEL ASHWINBHAI
40	MECHANICAL ENGINEERING	200390119504	PATEL SMIT SURESHBHAI
41	COMPUTER ENGINEERING	190390107056	SUKHADIYA AAGAM PARESHBHAI



Sr.No	BR_NAME	Enrolment number	Name
42	INFORMATION TECHNOLOGY	190390116017	PATEL DHYEY JITENDRAKUMAR
43	COMPUTER ENGINEERING	190390107034	PATEL DHARITRI MANVIRKUMAR
44	COMPUTER ENGINEERING	190390107001	BHAVSAR DHRUVI ANILKUMAR
45	CIVIL ENGINEERING	200390106507	CHAUDHARY PRAVINBHAI VIRBHANBHAI
46	COMPUTER ENGINEERING	190390107042	PATEL RIKEN NAINESHKUMAR
47	COMPUTER ENGINEERING	190390107043	PATEL SHREYASHKUMAR MAHENDRABHAI
48	COMPUTER ENGINEERING	190390107018	MANE HRUSHIKESH RAGHUNATH
49	COMPUTER ENGINEERING	190390107052	SAIYAD SHAHRUKH SADIK HUSEN
50	INFORMATION TECHNOLOGY	190390116023	PATEL LOVEKUMAR KANUBHAI
51	COMPUTER ENGINEERING	200390107502	GAJJAR SHRUTI RAJESH
52	COMPUTER ENGINEERING	190390107040	PATEL LAVKUMAR HEMANTBHAI
53	COMPUTER ENGINEERING	190390107020	SWAGATIKA MOHANTY
54	COMPUTER ENGINEERING	190390107054	SHAH NISHANT SANJAY
55	CIVIL ENGINEERING	200390106506	KHOKHANI AYUSH MEHULKUMAR
56	COMPUTER ENGINEERING	190390107041	PATEL NIRALI DINESHKUMAR
57	COMPUTER ENGINEERING	190390107017	LIMBACHIA JIMMY NIMESHBHAI
58	COMPUTER ENGINEERING	190390107051	RAVAL RUSHIKUMAR BHARATBHAI
59	INFORMATION TECHNOLOGY	190390116022	PATEL KYARI GIRISHKUMAR
60	CIVIL ENGINEERING	200390106504	PATEL PRACHIBEN SANJAYBHAI
61	COMPUTER ENGINEERING	190390107049	PRAJAPATI MITKUMAR KAMLESHBHAI
62	COMPUTER ENGINEERING	190390107023	SURBHI PANSURIYA
63	INFORMATION TECHNOLOGY	190390116049	THAKKAR PARTHKUMAR JAGDISHBHAI
64	COMPUTER ENGINEERING	200390107506	NAYAK TIRTHA SAMIR
65	COMPUTER ENGINEERING	190390107004	CHAVDA RAHUL KISHORBHAI
66	INFORMATION TECHNOLOGY	190390116006	KANSARA PURVISH HARDIK
67	COMPUTER ENGINEERING	190390107063	TIMBADIYA CHHAYA DINESHBHAI
68	COMPUTER ENGINEERING	190390107024	PATEL ABHIK DUSHYANTBHAI
69	MECHANICAL ENGINEERING	190390119002	BAROT SHASHANK RANJITBHAI
70	COMPUTER ENGINEERING	200390107511	Patel Mihir Vishnubhai
71	INFORMATION TECHNOLOGY	190390116043	SARAIYA YUKTA DIGESHKUMAR
72	COMPUTER ENGINEERING	190390107030	PATEL DEEP MUKESHBHAI
73	INFORMATION TECHNOLOGY	190390116012	NARSINGHANI HETAL GHANSHYAMBHAI
74	INFORMATION TECHNOLOGY	190390116001	BHATT SNEH RAHULBHAI
75	MECHANICAL ENGINEERING	190390119011	PRAJAPATI HARSHIT DHANJIBHAI
76	COMPUTER ENGINEERING	200390107509	PATEL JAIMEEN NIKUMBHAI
77	COMPUTER ENGINEERING	190390107008	GAJJAR HARSH ASHVINBHAI
78	INFORMATION TECHNOLOGY	190390116010	MANAVADARIYA NIVEDI HASMUKHBHAI
79	COMPUTER ENGINEERING	190390107066	VEKARIYA AGNESH RAMESHBHAI
80	COMPUTER ENGINEERING	190390107027	PATEL BHARGAVKUMAR SHAILESHBHAI
81	MECHANICAL ENGINEERING	190390119007	KANSARA HARIKRUSHNA PRAKASHCHANDRA
82	COMPUTER ENGINEERING	200390107510	SOLANKI FALGUNIBEN DILIPBHAI
83	INFORMATION TECHNOLOGY	190390116042	RAVAL GAURAVKUMAR RASIKBHAI
84	COMPUTER ENGINEERING	190390107028	PATEL BIREN SURESHKUMAR
85	INFORMATION TECHNOLOGY	190390116011	MODI VATSAL UPENDRAKUMAR



<b>Sr.No</b>	<b>BR_NAME</b>	<b>Enrolment number</b>	<b>Name</b>
86	COMPUTER ENGINEERING	190390107067	YADAV SATYAM NISHA YADAV
87	MECHANICAL ENGINEERING	190390119010	PATEL NIMABEN ANILBHAI
88	COMPUTER ENGINEERING	200390107504	Dhruvi Patel
89	INFORMATION TECHNOLOGY	190390116004	GANDHI KAUSHAL KANUBHAI
90	COMPUTER ENGINEERING	190390107060	THAKKAR VIBHA MAHESHKUMAR
91	COMPUTER ENGINEERING	190390107022	PANSURIYA PARASKUMAR SURESHBHAI
92	INFORMATION TECHNOLOGY	190390116048	THAKKAR JAY NILESHBHAI
93	CIVIL ENGINEERING	200390106505	NINAMA NAYNABEN RAMESHBHAI
94	INFORMATION TECHNOLOGY	190390116044	SAVALIYA HARSH FALGUNBHAI
95	COMPUTER ENGINEERING	190390107016	KANJARIYA PRADIP ASHOKBHAI
96	COMPUTER ENGINEERING	190390107050	PRAJAPATI RIYA PINKESHKUMAR
97	INFORMATION TECHNOLOGY	190390116020	PATEL KEVALKUMAR MANOJBHAI
98	COMPUTER ENGINEERING	200390107508	DIWAN SUJANBANU IMRANSHA
99	COMPUTER ENGINEERING	190390107064	TRIVEDI MAITRI HIRENBHAI
100	MECHANICAL ENGINEERING	190390119003	BHUVA GAURANG KUMAR JAYESHBHAI
101	CIVIL ENGINEERING	200390106501	MIHIR MODHA
102	COMPUTER ENGINEERING	190390107046	PATHAN FIZABANU YUSUFMIYA
103	COMPUTER ENGINEERING	190390107012	JAIN KAJAL MANOJKUMAR
104	INFORMATION TECHNOLOGY	190390116025	PATEL RAJ ARVINDBHAI
105	MECHANICAL ENGINEERING	200390119501	BHATT NISHYANK PRANTHESH
106	INFORMATION TECHNOLOGY	190390116041	RATHOD RAKESHKUMAR BHARATJI
107	COMPUTER ENGINEERING	190390107031	PATEL DEV BHUPENDRABHAI
108	INFORMATION TECHNOLOGY	190390116013	PAL HITESHKUMAR KAMLESHBHAI
109	INFORMATION TECHNOLOGY	190390116002	BHIMANI NIPESH RAVILALBHAI
110	MECHANICAL ENGINEERING	190390119012	SENGAL BHAUMIKKUMAR RAMESHBHAI

## **Course curriculum:**

### **1. Introduction to Entrepreneurship**

Definition of Entrepreneurship:

Entrepreneurship is the dynamic process of creating and managing a venture to exploit an opportunity for profit. It involves the willingness to take risks, innovation, and the ability to organize resources effectively.

Importance of Entrepreneurship in Today's World:

In the contemporary landscape, entrepreneurship plays a pivotal role in economic development, job creation, and fostering innovation. Entrepreneurs drive social change and contribute significantly to the growth and sustainability of economies.

Basic Principles of Entrepreneurship:

Fundamental principles include identifying opportunities, resource optimization, adaptability to change, and a customer-centric approach. Entrepreneurs need to be visionary, resilient, and possess effective problem-solving skills.

### **2. Understanding Innovation**

What is Innovation?

Innovation is the process of introducing new ideas, methods, or products that result in positive change. It can involve improvements to existing practices or the creation of entirely novel solutions to meet evolving needs.

Types of Innovation:

Innovation can manifest in various forms, including product innovation (new or improved products), process innovation (improvements in operations), and business model innovation (changing the way value is delivered).

Real-life Examples of Successful Innovations:

Illustrative examples could include companies like Apple with its iPhone, Tesla in electric vehicles, or Airbnb in the hospitality industry, showcasing how innovation contributes to market success.

### **3. Idea Generation and Creativity**

Techniques for Creative Thinking:

Encouraging divergent thinking through techniques like mind mapping, reverse brainstorming, and challenging assumptions fosters creative thinking essential for entrepreneurial success.

Brainstorming Sessions:

Interactive sessions where participants freely share ideas in a non-judgmental environment, promoting the generation of a wide array of creative solutions.

Cultivating Innovative Ideas:

Encouraging an environment that supports experimentation, learning from failures, and leveraging diverse perspectives to cultivate and refine innovative ideas.

### **4. Business Model Basics**

Introduction to Business Models:

A business model outlines how an organization creates, delivers, and captures value. It encompasses revenue streams, customer segments, channels, and key resources.

Key Components of a Business Model:

Identifying and understanding the key components such as value proposition, customer relationships, revenue streams, and cost structure is crucial for designing a sustainable and effective business model.

Examples of Successful Business Models:

Highlighting cases like the subscription-based model of Netflix, the platform model of Airbnb, or the freemium model of Dropbox to illustrate diverse and successful approaches to business models.

### **5. Developing a Business Plan**

Components of a Business Plan:

A comprehensive business plan includes an executive summary, company description, market analysis, organizational structure, product/service details, marketing strategy, financial projections, and an implementation plan.

#### Market Research and Analysis:

Conducting thorough market research to understand the target audience, competition, and industry trends is fundamental to developing a business plan that aligns with market needs.

#### Financial Planning and Projections:

Creating detailed financial forecasts, including income statements, balance sheets, and cash flow statements, to demonstrate the financial viability and sustainability of the business.

## 6. Risk Management

#### Identifying Potential Risks in Entrepreneurship:

Recognizing risks associated with market dynamics, competition, financial constraints, and external factors that may impact the success of an entrepreneurial venture.

#### Strategies for Risk Mitigation:

Developing effective risk mitigation strategies, including diversification, contingency planning, and regular assessments to adapt to changing circumstances.

## 7. Leadership and Team Building

#### Leadership Skills for Entrepreneurs:

Leadership in entrepreneurship involves vision setting, decision-making, and motivating a team. Effective leadership is crucial for navigating uncertainties and inspiring collective efforts.

#### Importance of Effective Teamwork:

Highlighting the collaborative nature of entrepreneurship and the importance of teamwork in pooling diverse skills, perspectives, and strengths toward common goals.

#### Team-building Exercises:

Engaging participants in practical team-building exercises to foster communication, trust, and synergy within entrepreneurial teams.

### **8. Pitching and Communication Skills**

#### Crafting an Effective Pitch:

Teaching participants the art of distilling complex ideas into concise, compelling messages that effectively communicate the value proposition, target market, and potential impact of their ventures.

#### Communication Skills for Entrepreneurs:

Emphasizing the importance of clear and persuasive communication in conveying ideas to investors, customers, and team members, essential for gaining support and building partnerships.

#### Pitching Practice Sessions:

Providing practical opportunities for participants to refine their pitching skills through simulated pitch sessions, receiving constructive feedback to enhance their delivery and message.

### **9. Entrepreneurial Ethics and Social Responsibility**

#### Ethical Considerations in Entrepreneurship:

Examining the ethical challenges entrepreneurs may face, such as transparency, fair treatment of employees, and honesty in business practices.

#### Social Responsibility of Entrepreneurs:

Highlighting the role entrepreneurs play in contributing positively to society, addressing social issues, and incorporating ethical practices into business operations.

### **10. Final Project: Business Idea Presentation**



### Students Presenting their Business Ideas:

Culmination of the course where participants present their developed business ideas, showcasing their understanding of entrepreneurship concepts and practical application.



**S.P.B. Patel Engineering College**

**NOTICE**

**Date: 4th October 2022**

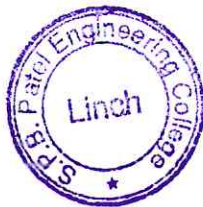
All Degree Engineering students are hereby informed that the Institute will organize a Project Management Training Program in October 2022.

Interested students should provide their names to their respective departments

  
Principal

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2. NOTICE BOARD



**Report on**  
**Project Management**  
**S.P.B. Patel Engineering College**

**Date:** October 2022

**Duration:** 30 hours

**Participants:** 118

**Organizer:** S.P.B. Patel Engineering College

**Expert:** Prof. Tausif Shaikh

**Executive Summary:**

The Project Management Training Program conducted by S.P.B. Patel Engineering College in October 2022 was designed to equip participants with essential skills and knowledge in project management. Over the course of 30 hours, 2 lectures a week, where 118 participants engaged in comprehensive sessions covering project management fundamentals, methodologies, initiation, planning, risk management, execution, control, and closure. The program aimed to enhance participants' understanding of project management principles and their application in various industries.

**Program Overview:**

The training program was structured into four main modules: Introduction to Project Management, Project Planning and Risk Management, Project Execution and Control, and Project Closure. Each module covered specific topics essential for effective project management.

## **Key Highlights:**

### **1. Project Management Fundamentals:**

- Definition and Importance of Project Management emphasized the significance of effective project management for organizational success.
- Key Concepts and Terminology introduced fundamental project management terms ensuring participants had a solid foundation.
- Overview of Project Management Processes and Phases provided insight into the project management lifecycle.

### **2. Project Management Methodologies:**

- Comparison of Waterfall vs. Agile methodologies enabled participants to understand different approaches and their suitability for various projects.
- Roles and Responsibilities highlighted the importance of clear communication and collaboration among project stakeholders.
- Case Studies of Successful Project Management offered real-world examples across different industries.

### **3. Project Initiation:**

- Defining Project Objectives, Scope, and Stakeholders stressed the significance of alignment with organizational goals.
- Work Breakdown Structure (WBS) and Project Scheduling Techniques provided practical tools for project initiation.

### **4. Project Planning and Risk Management:**

- Resource Allocation and Management techniques were discussed to ensure efficient resource utilization.
- Risk Management sessions covered risk identification, assessment, response strategies, and contingency planning.

- Quality Management Principles emphasized the importance of quality planning, assurance, and control processes.

### **5. Project Execution and Control:**

- Strategies for managing project execution, change management processes, and conflict resolution techniques were addressed.
- Monitoring and Controlling Project Performance sessions focused on measuring project performance and variance analysis.
- Project Closure covered closing processes, deliverables, lessons learned, and project reviews.

### **Outcomes:**

- Enhanced understanding of project management principles and methodologies.
- Improved ability to initiate, plan, execute, and control projects effectively.
- Development of skills in risk management, resource allocation, and quality assurance.
- Increased awareness of project closure processes and importance of lessons learned.

### **Conclusion:**

The Project Management Training Program conducted by S.P.B. Patel Engineering College in October 2022 provided participants with a comprehensive understanding of project management principles and practical tools necessary for successful project execution. The engagement of 118 participants over 30 hours demonstrates the program's effectiveness in delivering valuable insights and skills in project management.

### **Recommendations:**



- Offer follow-up workshops or advanced courses for participants interested in further deepening their project management skills.
- Incorporate more interactive activities and case studies to enhance participant engagement and practical application of concepts.
- Provide additional resources and materials for ongoing learning and reference.

**Photographs:**



## ATTENDANCE SHEET OF STUDENTS

### List of Students Participated:

Sr.no	BR_NAME	map_number	Name
1	MECHANICAL ENGINEERING	200390119502	jeet pratapbhai pomal
2	INFORMATION TECHNOLOGY	190390116039	PRAJAPATI YASH GANESHBHAI
3	INFORMATION TECHNOLOGY	190390116014	PATEL AKSHAYKUMAR PANKAJBHAI
4	COMPUTER ENGINEERING	190390107055	SIDDHPURA MILAN JAYESHBHAI
5	COMPUTER ENGINEERING	190390107032	PATEL DEV BIPINBHAI
6	MECHANICAL ENGINEERING	190390119013	SHARMA RONIT RAMNIWAS
7	INFORMATION TECHNOLOGY	190390116045	SHETH KRISHA NILESH
8	MECHANICAL ENGINEERING	200390119505	SHARMA TITHI NAVINKUMAR
9	COMPUTER ENGINEERING	190390107057	SUKHADIYA HEMANG ATULKUMAR
10	INFORMATION TECHNOLOGY	190390116028	PATEL RUTVIK RAJESHBHAI
11	COMPUTER ENGINEERING	190390107037	PATEL JAY ASHWINBHAI
12	CIVIL ENGINEERING	190390106001	GUPTA KUNAL RAKESHBHAI
13	MECHANICAL ENGINEERING	200390119506	Pratham Kirti Jain
14	INFORMATION TECHNOLOGY	190390116040	RAJPUT SHIVAM RAMKUMAR
15	INFORMATION TECHNOLOGY	190390116030	PATEL SUJAL KAMLESHBHAI
16	COMPUTER ENGINEERING	190390107038	PATEL JAYKUMAR DINESHBHAI
17	CIVIL ENGINEERING	190390106002	KALAVADIYA PRINCE PARESHBHAI
18	MECHANICAL ENGINEERING	190390119014	SUTHAR DHAVALKUMAR AMRABHAI
19	INFORMATION TECHNOLOGY	190390116033	PATHAK HARDIK SHASHIKANT
20	INFORMATION TECHNOLOGY	190390116036	PRAJAPATI PRATIK KAMLESHKUMAR
21	COMPUTER ENGINEERING	190390107002	CHAUDHARY DASHARATHBHAI TRIKAMABHAI
22	MECHANICAL ENGINEERING	190390119015	SUTHAR SHIVAM MUKESHKUMAR
23	MECHANICAL ENGINEERING	190390119016	SUTHAR SHUBHAM MUKESHKUMAR
24	COMPUTER ENGINEERING	190390107009	GOR KHUSHIBEN MINESHKUMAR
25	INFORMATION TECHNOLOGY	190390116035	PRAJAPATI KIRTAN RAJUBHAI
26	COMPUTER ENGINEERING	190390107010	HANSALIA DEVKI PRAKASHBHAI
27	AUTOMOBILE ENGINEERING	140390102016	MIHIR THAKKAR
28	COMPUTER ENGINEERING	190390107045	PATEL YASHKUMAR JAYESHBHAI
29	COMPUTER ENGINEERING	190390107011	JADLIWALA HUZEFA ISMAIL
30	INFORMATION TECHNOLOGY	190390116024	PATEL NEEL ASHWINBHAI
31	MECHANICAL ENGINEERING	200390119504	PATEL SMIT SURESHBHAI
32	COMPUTER ENGINEERING	190390107056	SUKHADIYA AAGAM PARESHBHAI
33	INFORMATION TECHNOLOGY	190390116017	PATEL DHYEY JITENDRAKUMAR
34	COMPUTER ENGINEERING	190390107034	PATEL DHARITRI MANVIRKUMAR
35	INFORMATION TECHNOLOGY	190390116046	SONI AYUSHI RAKESHKUMAR

36	CIVIL ENGINEERING	200390106502	Heenaba Nirubha Zala
37	COMPUTER ENGINEERING	190390107013	JASANI VITRAG MITESHBHAI
38	COMPUTER ENGINEERING	190390107047	PRADHAN SHANKHADEEP NITAI
39	INFORMATION TECHNOLOGY	190390116026	PATEL RAJ KAMLESHKUMAR
40	INFORMATION TECHNOLOGY	190390116018	PATEL DIVYA MANOJKUMAR
41	CIVIL ENGINEERING	200390106503	MORKER ZEELKUMAR AJAYBHAI
42	COMPUTER ENGINEERING	190390107048	PRAJAPATI MIREN ASHOKKUMAR
43	COMPUTER ENGINEERING	190390107043	PATEL SHREYASHKUMAR MAHENDRABHAI
44	COMPUTER ENGINEERING	190390107018	MANE HRUSHIKESH RAGHUNATH
45	COMPUTER ENGINEERING	190390107052	SAIYAD SHAHRUKH SADIK HUSEN
46	INFORMATION TECHNOLOGY	190390116023	PATEL LOVEKUMAR KANUBHAI
47	COMPUTER ENGINEERING	200390107502	GAJJAR SHRUTI RAJESH
48	COMPUTER ENGINEERING	190390107040	PATEL LAVKUMAR HEMANTBHAI
49	COMPUTER ENGINEERING	190390107020	SWAGATIKA MOHANTY
50	COMPUTER ENGINEERING	190390107054	SHAH NISHANT SANJAY
51	CIVIL ENGINEERING	200390106506	KHOKHANI AYUSH MEHULKUMAR
52	COMPUTER ENGINEERING	190390107041	PATEL NIRALI DINESHKUMAR
53	COMPUTER ENGINEERING	190390107017	LIMBACHIA JIMMY NIMESHBHAI
54	COMPUTER ENGINEERING	190390107051	RAVAL RUSHIKUMAR BHARATBHAI
55	INFORMATION TECHNOLOGY	190390116022	PATEL KYARI GIRISHKUMAR
56	CIVIL ENGINEERING	200390106504	PATEL PRACHIBEN SANJAYBHAI
57	COMPUTER ENGINEERING	190390107049	PRAJAPATI MITKUMAR KAMLESHBHAI
58	COMPUTER ENGINEERING	190390107015	KAMANI PREMALKUMAR ASHOKBHAI
59	INFORMATION TECHNOLOGY	190390116019	PATEL JAIMIN KIRITKUMAR
60	COMPUTER ENGINEERING	200390107505	Dave Manav Sanjay
61	COMPUTER ENGINEERING	190390107003	CHAUDHARY KHUVENDRASINGH SURENDRASINGH
62	INFORMATION TECHNOLOGY	190390116005	JOSE ANGEL G
63	COMPUTER ENGINEERING	190390107062	THAKUR JESAL DEVRAJSINGH
64	COMPUTER ENGINEERING	190390107023	SURBHI PANSURIYA
65	INFORMATION TECHNOLOGY	190390116049	THAKKAR PARTHKUMAR JAGDISHBHAI
66	MECHANICAL ENGINEERING	190390119002	BAROT SHASHANK RANJITBHAI
67	COMPUTER ENGINEERING	200390107511	Patel Mihir Vishnubhai
68	INFORMATION TECHNOLOGY	190390116043	SARAIYA YUKTA DIGESHKUMAR
69	COMPUTER ENGINEERING	190390107030	PATEL DEEP MUKESHBHAI
70	INFORMATION TECHNOLOGY	190390116012	NARSINGHANI HETAL GHANSHYAMBHAI
71	INFORMATION TECHNOLOGY	190390116001	BHATT SNEH RAHULBHAI
72	MECHANICAL ENGINEERING	190390119011	PRAJAPATI HARSHIT DHANJIBHAI
73	COMPUTER ENGINEERING	200390107509	PATEL JAIMEEN NIKUMBHAI
74	COMPUTER ENGINEERING	190390107008	GAJJAR HARSH ASHVINBHAI
75	INFORMATION TECHNOLOGY	190390116010	MANAVADARIYA NIVEDI HASMUKHBHAI
76	COMPUTER ENGINEERING	190390107066	VEKARIYA AGNESH RAMESHBHAI
77	COMPUTER ENGINEERING	190390107027	PATEL BHARGAVKUMAR SHAILESHBHAI
78	MECHANICAL ENGINEERING	190390119007	KANSARA HARIKRUSHNA PRAKASHCHANDRA

79	COMPUTER ENGINEERING	200390107510	SOLANKI FALGUNIBEN DILIPBHAI
80	INFORMATION TECHNOLOGY	190390116042	RAVAL GAURAVKUMAR RASIKBHAI
81	COMPUTER ENGINEERING	190390107028	PATEL BIREN SURESHKUMAR
82	INFORMATION TECHNOLOGY	190390116011	MODI VATSAL UPENDRAKUMAR
83	COMPUTER ENGINEERING	190390107022	PANSURIYA PARASKUMAR SURESHBHAI
84	INFORMATION TECHNOLOGY	190390116048	THAKKAR JAY NILESHBHAI
85	CIVIL ENGINEERING	200390106505	NINAMA NAYNABEN RAMESHBHAI
86	INFORMATION TECHNOLOGY	190390116044	SAVALIYA HARSH FALGUNBHAI
87	COMPUTER ENGINEERING	190390107016	KANJARIYA PRADIP ASHOKBHAI
88	COMPUTER ENGINEERING	190390107050	PRAJAPATI RIYA PINKESHKUMAR
89	INFORMATION TECHNOLOGY	190390116020	PATEL KEVALKUMAR MANOJBHAI
90	COMPUTER ENGINEERING	200390107508	DIWAN SUJANBANU IMRANSHA
91	COMPUTER ENGINEERING	190390107007	DAVE SOHAM VIJAYKUMAR
92	INFORMATION TECHNOLOGY	190390116008	KHATRI SAGAR NIKUNJBHAI
93	COMPUTER ENGINEERING	190390107065	VARIYA ABHIRAJ SHIRISHBHAI
94	COMPUTER ENGINEERING	190390107026	PATEL ARYAN BAKULESH
95	MECHANICAL ENGINEERING	190390119004	CHAUHAN HARSHITSINH BHUPENDRASINH
96	COMPUTER ENGINEERING	200390107503	YASH SARADVA
97	INFORMATION TECHNOLOGY	190390116003	DARJI JAIMIN MUKESHBHAI
98	COMPUTER ENGINEERING	190390107059	THAKKAR UMANG KALPESHKUMAR
99	COMPUTER ENGINEERING	190390107021	OZA PARTH RAJESHBHAI
100	COMPUTER ENGINEERING	200390107501	Patel Dhruv Dhanpalbhai
101	COMPUTER ENGINEERING	190390107019	MANSURI AAYESHA ILYASBHAI
102	COMPUTER ENGINEERING	190390107053	SHAH NIR DILIPBHAI
103	COMPUTER ENGINEERING	200390107507	CHAUHAN SHIVANIBEN SUNILKUMAR
104	COMPUTER ENGINEERING	190390107006	CHOVATIYA VISHAL DHARMENDRABHAI
105	COMPUTER ENGINEERING	190390107025	PATEL ABHISHEK MAHESHBHAI
106	INFORMATION TECHNOLOGY	190390116007	KATAVA MAHAMMADTAUKIR MAHAMMADIQBAL
107	COMPUTER ENGINEERING	190390107064	TRIVEDI MAITRI HIRENBHAI
108	MECHANICAL ENGINEERING	190390119003	BHUVA GAURANG KUMAR JAYESHBHAI
109	CIVIL ENGINEERING	200390106501	MIHIR MODHA
110	COMPUTER ENGINEERING	190390107046	PATHAN FIZABANU YUSUFMIYA
111	COMPUTER ENGINEERING	190390107012	JAIN KAJAL MANOJKUMAR
112	INFORMATION TECHNOLOGY	190390116025	PATEL RAJ ARVINDBHAI
113	MECHANICAL ENGINEERING	200390119501	BHATT NISHYANK PRANTHESH
114	INFORMATION TECHNOLOGY	190390116041	RATHOD RAKESHKUMAR BHARATJI
115	COMPUTER ENGINEERING	190390107031	PATEL DEV BHUPENDRABHAI
116	INFORMATION TECHNOLOGY	190390116013	PAL HITESHKUMAR KAMLESHBHAI
117	INFORMATION TECHNOLOGY	190390116002	BHIMANI NIPESH RAVILALBHAI
118	MECHANICAL ENGINEERING	190390119012	SENGAL BHAUMIKKUMAR RAMESHBHAI



## **Curriculum Notes:**

### **1. Project Management Fundamentals**

- **Definition and Importance of Project Management:** Project management is the practice of initiating, planning, executing, controlling, and closing projects to achieve specific goals within defined constraints. It is essential for organizations to effectively manage projects to deliver value to stakeholders, meet deadlines, and stay within budget.
- **Key Concepts and Terminology:** Introduce fundamental project management terms such as project, program, portfolio, stakeholders, scope, schedule, budget, and deliverables. Ensure participants have a clear understanding of these concepts to build a solid foundation for the rest of the course.
- **Overview of Project Management Processes and Phases:** Provide an overview of the project management lifecycle, including initiation, planning, and execution, monitoring and controlling, and closing phases. Explain the key activities and deliverables associated with each phase.

### **2. Project Management Methodologies**

- **Waterfall vs. Agile:** Compare and contrast traditional waterfall methodology with agile methodology. Discuss the advantages and disadvantages of each approach and their suitability for different types of projects.
- **Roles and Responsibilities:** Explain the roles and responsibilities of project managers, project sponsors, project team members, and other stakeholders. Emphasize the importance of effective communication and collaboration among team members.
- **Case Studies of Successful Project Management:** Analyze case studies of successful project management in various industries such as construction, IT, healthcare, and manufacturing. Identify key success factors and lessons learned from each case study.

### **3. Project Initiation**

- **Defining Project Objectives, Scope, and Stakeholders:** Discuss the importance of clearly defining project objectives, scope, and stakeholders at the beginning of the project. Emphasize the need for alignment between project goals and organizational objectives.
- **Work Breakdown Structure (WBS):** Explain the concept of WBS and its role in breaking down the project scope into manageable work packages. Guide participants in developing a WBS for a sample project.

- **Project Scheduling Techniques:** Introduce techniques such as Gantt charts, network diagrams (PERT/CPM), and critical path analysis for project scheduling. Discuss the advantages and limitations of each technique.

#### **4. Project Execution**

- **Managing Tasks and Assigning Responsibilities:** Explain the importance of task management and role clarity in project execution. Discuss techniques for assigning responsibilities and managing task dependencies.
- **Communication and Collaboration Strategies:** Discuss strategies for effective communication and collaboration among project team members, stakeholders, and other relevant parties. Emphasize the importance of regular meetings, status reports, and project documentation.
- **Tools and Techniques for Tracking Project Performance:** Introduce tools and techniques for tracking and managing project performance, such as earned value management (EVM), variance analysis, and project dashboards. Discuss how these tools can help project managers monitor progress and identify potential issues.

### **Project Planning and Risk Management**

#### **1. Resource Allocation and Management**

- **Resource Allocation Techniques:** Discuss different resource allocation techniques such as resource leveling, resource smoothing, and resource optimization. Explain how to balance resource demand with resource availability to ensure project success.
- **Resource Management Tools:** Introduce project management software tools and techniques for resource management, such as resource calendars, resource histograms, and resource allocation matrices. Discuss their features and functionalities.
- **Risk Management:** Introduce the concept of risk management and its importance in project planning and execution. Discuss techniques for identifying, assessing, and mitigating project risks. Emphasize the need for proactive risk management to minimize the impact of uncertainties on project outcomes.

#### **2. Risk Management: Identification and Assessment**

- **Understanding Project Risks:** Discuss the different types of project risks, including technical, organizational, environmental, and external risks. Emphasize the importance of identifying and addressing risks proactively.

- Risk Identification Techniques: Introduce techniques such as SWOT analysis, risk registers, and brainstorming sessions for identifying project risks. Discuss the advantages and limitations of each technique.
- Quantitative and Qualitative Risk Analysis: Explain the difference between quantitative and qualitative risk analysis. Discuss techniques such as probability and impact assessment, sensitivity analysis, and Monte Carlo simulation.

### **3. Risk Response Strategies**

- Developing Risk Response Plans: Discuss techniques for developing risk response plans, including risk avoidance, risk mitigation, risk transfer, and risk acceptance. Emphasize the importance of developing contingency plans to address unforeseen risks.
- Risk Mitigation Strategies: Explain how to implement risk mitigation strategies to reduce the likelihood or impact of identified risks. Discuss techniques such as risk prioritization, risk avoidance, and risk reduction.
- Contingency Planning: Discuss the importance of contingency planning in project management. Explain how to develop contingency plans to address risks that cannot be mitigated or avoided.

### **4. Quality Management Principles**

- Principles of Quality Management: Introduce the principles of quality management, including customer focus, continuous improvement, and stakeholder engagement. Discuss the importance of quality management in achieving project success.
- Quality Planning and Assurance: Discuss the process of establishing quality objectives and standards for a project. Emphasize the importance of defining clear quality criteria and metrics to measure project performance.
- Quality Control Processes: Explain techniques for implementing quality control processes, such as inspections, reviews, and testing. Emphasize the importance of monitoring and measuring project outputs to ensure compliance with quality standards.

## **Project Execution and Control**

### **1. Project Execution Strategies**

- Managing Project Execution: Discuss strategies for managing project execution, including creating project schedules, assigning tasks, and monitoring progress. Emphasize the importance of adhering to project timelines and deliverables.

- **Change Management Processes:** Explain how to manage changes to project scope, schedule, and budget. Discuss techniques for assessing change requests, obtaining approvals, and communicating changes to stakeholders.
- **Conflict Resolution Techniques:** Discuss strategies for resolving conflicts and disputes that may arise during project execution. Emphasize the importance of addressing conflicts promptly to prevent them from escalating.

## **2. Monitoring and Controlling Project Performance**

- **Project Performance Measurement:** Discuss techniques for measuring project performance, such as earned value management (EVM), key performance indicators (KPIs), and balanced scorecards. Emphasize the importance of monitoring progress against project baselines.
- **Earned Value Management (EVM):** Explain the concept of EVM and its role in measuring project performance. Discuss key EVM metrics such as planned value (PV), earned value (EV), and actual cost (AC).
- **Variance Analysis:** Discuss techniques for analyzing variances between planned and actual project performance. Explain how to identify and address deviations from project baselines to ensure project success.

## **3. Project Closure**

- **Closing Processes and Deliverables:** Discuss the activities and deliverables associated with project closure, including obtaining customer acceptance, releasing project resources, and archiving project documentation.
- **Lessons Learned and Project Reviews:** Explain the importance of conducting project reviews and capturing lessons learned. Discuss techniques for documenting project successes, challenges, and areas for improvement.



## S.P.B. Patel Engineering College

### NOTICE

**Date: 29th August 2022**

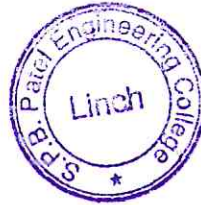
All Degree Engineering students are hereby informed that the Institute will organize a Robotics and Animation workshop in September 2022.

Interested students should provide their names to their respective departments.

*Neonika*  
Principal

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## **Report on**

# **Robotics and Automation Course**

## **Saffrony Institute of Technology**

**Date:** September 2022

**Duration:** 31 hours

**Participants:** 90

**Organizer:** Saffrony Institute

**Experts:** Prof. Nirav Joshi & Prof. Chetan Chauhan

### **Introduction:**

The Robotics and Automation Course workshop held in September – October 2022 brought together 90 participants eager to explore the latest developments in robotics technology and automation systems. The workshop aimed to provide attendees with practical knowledge and skills essential for navigating the rapidly evolving field of robotics and automation.

### **Key Highlights:**

- 1. Cutting-Edge Presentations:** Industry experts and leading researchers delivered presentations on a wide range of topics, including robotic systems design, artificial intelligence in robotics, industrial automation, and collaborative robotics. These sessions provided valuable insights into the current state of the art and future trends in robotics and automation.
- 2. Hands-On Workshops:** Participants engaged in hands-on workshops designed to familiarize them with various robotic platforms, automation tools, and programming languages. These practical sessions allowed attendees to gain firsthand experience in robot programming, sensor integration, and control algorithms.
- 3. Industry Case Studies:** Real-world case studies from diverse industries, such as manufacturing, healthcare, agriculture, and logistics, were presented to illustrate the practical applications of robotics and automation. Participants learned how organizations are leveraging robotic technologies to improve efficiency, productivity, and safety in their operations.



**4. Interactive Discussions:** Interactive panel discussions and Q&A sessions provided participants with the opportunity to engage with experts and peers, exchange ideas, and address key challenges facing the robotics and automation industry. Topics discussed included ethics in robotics, human-robot interaction, and the impact of automation on the workforce.

**5. Networking Opportunities:** The workshop facilitated networking among participants, fostering collaborations and partnerships among industry professionals, researchers, and students. Attendees had the chance to connect with potential employers, mentors, and collaborators, expanding their professional network within the robotics community.

### **Outcomes:**

**1. Enhanced Skills:** Participants gained practical skills and knowledge in robot programming, automation technologies, and system integration, equipping them with the competencies needed to excel in their careers in robotics and automation.

**2. Industry Insights:** The workshop provided attendees with valuable insights into the latest advancements and trends in robotics technology, as well as the practical challenges and opportunities associated with implementing automation solutions across different industries.

**3. Networking Connections:** Participants established meaningful connections with industry professionals, researchers, and peers, creating opportunities for collaboration, mentorship, and career advancement within the robotics and automation ecosystem.

**4. Professional Development:** The workshop contributed to the professional development of participants by providing them with access to cutting-edge knowledge, practical skills, and networking opportunities essential for success in the field of robotics and automation.

### **Conclusion:**

The Robotics and Automation Course workshop held in September 2022 was a resounding success, bringing together 90 participants for an enriching experience of learning, collaboration, and networking. Through insightful presentations, hands-on workshops, and interactive discussions, attendees gained valuable skills, knowledge, and connections that will empower them to make significant contributions to the advancement of robotics and automation in the years to come.

**Photographs:**



## ATTENDANCE SHEET OF STUDENTS

### List of Participants:

Sr.no	BR_NAME	map_number	Name
1	MECHANICAL ENGINEERING	200390119502	jeet pratapbhai pomal
2	COMPUTER ENGINEERING	190390107055	SIDDHPURA MILAN JAYESHBHAI
3	COMPUTER ENGINEERING	190390107032	PATEL DEV BIPINBHAI
4	MECHANICAL ENGINEERING	190390119013	SHARMA RONIT RAMNIWAS
5	MECHANICAL ENGINEERING	200390119503	DABHI JENISH PIYUSHBHAI
6	COMPUTER ENGINEERING	190390107058	THAKAR JANVI DINESHBHAI
7	COMPUTER ENGINEERING	190390107033	PATEL DEVKUMAR BRIJESHKUMAR
8	MECHANICAL ENGINEERING	200390119505	SHARMA TITHI NAVINKUMAR
9	COMPUTER ENGINEERING	190390107057	SUKHADIYA HEMANG ATULKUMAR
10	COMPUTER ENGINEERING	190390107037	PATEL JAY ASHWINBHAI
11	MECHANICAL ENGINEERING	200390119506	Pratham Kirti Jain
12	COMPUTER ENGINEERING	190390107038	PATEL JAYKUMAR DINESHBHAI
13	MECHANICAL ENGINEERING	190390119014	SUTHAR DHAVALKUMAR AMRABHAI
14	COMPUTER ENGINEERING	190390107002	CHAUDHARY DASHARATHBHAI TRIKAMABHAI
15	MECHANICAL ENGINEERING	190390119015	SUTHAR SHIVAM MUKESHKUMAR
16	MECHANICAL ENGINEERING	190390119016	SUTHAR SHUBHAM MUKESHKUMAR
17	COMPUTER ENGINEERING	190390107009	GOR KHUSHIBEN MINESHKUMAR
18	COMPUTER ENGINEERING	190390107044	PATEL SUHANIBEN ASHOKBHAI
19	COMPUTER ENGINEERING	190390107010	HANSALIA DEVKI PRAKASHBHAI
20	COMPUTER ENGINEERING	190390107045	PATEL YASHKUMAR JAYESHBHAI
21	COMPUTER ENGINEERING	190390107011	JADLIWALA HUZEFA ISMAIL
22	MECHANICAL ENGINEERING	200390119504	PATEL SMIT SURESBHAI
23	COMPUTER ENGINEERING	190390107056	SUKHADIYA AAGAM PARESBHAI
24	COMPUTER ENGINEERING	190390107034	PATEL DHARITRI MANVIRKUMAR
25	COMPUTER ENGINEERING	190390107013	JASANI VITRAG MITESHBHAI
26	COMPUTER ENGINEERING	190390107047	PRADHAN SHANKHADEEP NITAI
27	COMPUTER ENGINEERING	190390107048	PRAJAPATI MIREN ASHOKKUMAR
28	COMPUTER ENGINEERING	190390107014	JOSHI CHIRAGKUMAR PRADIPBHAI
29	COMPUTER ENGINEERING	190390107039	PATEL KRITKUMAR KANUBHAI
30	COMPUTER ENGINEERING	190390107001	BHAVSAR DHRUVI ANILKUMAR
31	COMPUTER ENGINEERING	190390107042	PATEL RIKEN NAINESHKUMAR
32	COMPUTER ENGINEERING	190390107043	PATEL SHREYASHKUMAR MAHENDRABHAI
33	COMPUTER ENGINEERING	190390107018	MANE HRUSHIKESH RAGHUNATH
34	COMPUTER ENGINEERING	190390107052	SAIYAD SHAHRUKH SADIK HUSEN
35	COMPUTER ENGINEERING	200390107502	GAJJAR SHRUTI RAJESH
36	COMPUTER ENGINEERING	190390107040	PATEL LAVKUMAR HEMANTBHAI

Sr.no	BR_NAME	map_number	Name
37	COMPUTER ENGINEERING	190390107020	SWAGATIKA MOHANTY
38	COMPUTER ENGINEERING	190390107054	SHAH NISHANT SANJAY
39	COMPUTER ENGINEERING	190390107041	PATEL NIRALI DINESHKUMAR
40	COMPUTER ENGINEERING	190390107017	LIMBACHIA JIMMY NIMESHBHAI
41	COMPUTER ENGINEERING	190390107051	RAVAL RUSHIKUMAR BHARATBHAI
42	COMPUTER ENGINEERING	190390107049	PRAJAPATI MITKUMAR KAMLESHBHAI
43	COMPUTER ENGINEERING	190390107015	KAMANI PREMALKUMAR ASHOKBHAI
44	COMPUTER ENGINEERING	200390107505	Dave Manav Sanjay
45	COMPUTER ENGINEERING	190390107003	CHAUDHARY KHUVENDRASINGH SURENDRASINGH
46	COMPUTER ENGINEERING	190390107062	THAKUR JESAL DEVRAJSINGH
47	COMPUTER ENGINEERING	190390107023	SURBHI PANSURIYA
48	COMPUTER ENGINEERING	200390107506	NAYAK TIRTHA SAMIR
49	COMPUTER ENGINEERING	190390107004	CHAVDA RAHUL KISHORBHAI
50	COMPUTER ENGINEERING	190390107063	TIMBADIYA CHHAYA DINESHBHAI
51	COMPUTER ENGINEERING	190390107024	PATEL ABHIK DUSHYANTBHAI
52	MECHANICAL ENGINEERING	190390119002	BAROT SHASHANK RANJITBHAI
53	COMPUTER ENGINEERING	200390107511	Patel Mihir Vishnubhai
54	COMPUTER ENGINEERING	190390107030	PATEL DEEP MUKESHBHAI
55	MECHANICAL ENGINEERING	190390119011	PRAJAPATI HARSHIT DHANJIBHAI
56	COMPUTER ENGINEERING	200390107509	PATEL JAIMEEN NIKUMBHAI
57	COMPUTER ENGINEERING	190390107008	GAJJAR HARSH ASHVINBHAI
58	COMPUTER ENGINEERING	190390107066	VEKARIYA AGNESH RAMESHBHAI
59	COMPUTER ENGINEERING	190390107027	PATEL BHARGAVKUMAR SHAILESHBHAI
60	MECHANICAL ENGINEERING	190390119007	KANSARA HARIKRUSHNA PRAKASHCHANDRA
61	COMPUTER ENGINEERING	200390107510	SOLANKI FALGUNIBEN DILIPBHAI
62	COMPUTER ENGINEERING	190390107028	PATEL BIREN SURESHKUMAR
63	COMPUTER ENGINEERING	190390107067	YADAV SATYAM NISHA YADAV
64	MECHANICAL ENGINEERING	190390119010	PATEL NIMABEN ANILBHAI
65	COMPUTER ENGINEERING	200390107504	Dhruvi Patel
66	COMPUTER ENGINEERING	190390107060	THAKKAR VIBHA MAHESHKUMAR
67	COMPUTER ENGINEERING	190390107022	PANSURIYA PARASKUMAR SURESHBHAI
68	COMPUTER ENGINEERING	190390107016	KANJARIYA PRADIP ASHOKBHAI
69	COMPUTER ENGINEERING	190390107050	PRAJAPATI RIYA PINKESHKUMAR
70	COMPUTER ENGINEERING	200390107508	DIWAN SUJANBANU IMRANSHA
71	COMPUTER ENGINEERING	190390107007	DAVE SOHAM VIJAYKUMAR
72	COMPUTER ENGINEERING	190390107065	VARIYA ABHIRAJ SHIRISHBHAI
73	COMPUTER ENGINEERING	190390107026	PATEL ARYAN BAKULESH
74	MECHANICAL ENGINEERING	190390119004	CHAUHAN HARSHITSINH BHUPENDRASINH
75	COMPUTER ENGINEERING	200390107503	YASH SARADVA
76	COMPUTER ENGINEERING	190390107059	THAKKAR UMANG KALPESHKUMAR
77	COMPUTER ENGINEERING	190390107021	OZA PARTH RAJESHBHAI
78	COMPUTER ENGINEERING	200390107501	Patel Dhruv Dhanpalbhai
79	COMPUTER ENGINEERING	190390107019	MANSURI AAYESHA ILYASBHAI



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Sr.no	BR_NAME	map_number	Name
80	COMPUTER ENGINEERING	190390107053	SHAH NIR DILIPBHAI
81	COMPUTER ENGINEERING	200390107507	CHAUHAN SHIVANIBEN SUNILKUMAR
82	COMPUTER ENGINEERING	190390107006	CHOVATIYA VISHAL DHARMENDRABHAI
83	COMPUTER ENGINEERING	190390107025	PATEL ABHISHEK MAHESHBHAI
84	COMPUTER ENGINEERING	190390107064	TRIVEDI MAITRI HIRENBHAI
85	MECHANICAL ENGINEERING	190390119003	BHUVA GAURANG KUMAR JAYESHBHAI
86	COMPUTER ENGINEERING	190390107046	PATHAN FIZABANU YUSUFMIYA
87	COMPUTER ENGINEERING	190390107012	JAIN KAJAL MANOJKUMAR
88	MECHANICAL ENGINEERING	200390119501	BHATT NISHYANK PRANTHESH
89	COMPUTER ENGINEERING	190390107031	PATEL DEV BHUPENDRABHAI
90	MECHANICAL ENGINEERING	190390119012	SENGAL BHAUMIKKUMAR RAMESHBHAI

*W. Patel*



## **Course Curriculum:**

### **Robotics and Automation**

#### **Introduction to Robotics**

1. Introduction to Robotics (400 words)
  - Definition of Robotics: Provide an overview of robotics as the interdisciplinary field of study that encompasses mechanical engineering, electrical engineering, computer science, and other disciplines.
  - History of Robotics: Explore the evolution of robotics from early automatons to modern-day robots. Discuss key milestones and breakthroughs in robotics technology.
  - Applications of Robotics: Highlight the diverse range of applications of robotics in industries such as manufacturing, healthcare, agriculture, space exploration, and entertainment.
2. Fundamental Concepts in Robotics (400 words)
  - Robot Components: Introduce the basic components of a robot, including sensors, actuators, controllers, and effectors. Discuss their functions and roles in robot operation.
  - Types of Robots: Explore different types of robots based on their design, locomotion, and application. Discuss industrial robots, mobile robots, humanoid robots, and collaborative robots (cobots).
  - Robot Kinematics and Dynamics: Provide an overview of robot kinematics and dynamics, including forward and inverse kinematics, trajectory planning, and motion control.
3. Robotics Technologies and Trends (400 words)
  - Emerging Robotics Technologies: Discuss recent advancements in robotics technology, such as artificial intelligence (AI), machine learning, computer vision, and natural language processing.
  - Robotics in Industry 4.0: Explore the role of robotics in the fourth industrial revolution (Industry 4.0) and smart manufacturing. Discuss concepts such as cyber-physical systems, the Internet of Things (IoT), and digital twins.
  - Ethical and Social Implications: Address ethical considerations and societal impacts of robotics technology, including job displacement, privacy concerns, and ethical AI.
4. Hands-on Activity: Robot Demonstration and Exploration (400 words)
  - Demonstration of Robots: Showcase different types of robots and their capabilities through live demonstrations. Allow participants to interact with robots and observe their functionality.
  - Robot Exploration: Provide hands-on experience with robot manipulators, mobile robots, and other robotic systems. Allow participants to explore robot control interfaces and experiment with basic tasks.

#### **Automation Systems and Control**



1. Introduction to Automation Systems (400 words)
  - Definition of Automation: Define automation as the use of technology to perform tasks with minimal human intervention. Discuss the benefits of automation, including increased productivity, efficiency, and safety.
  - Components of Automation Systems: Introduce the components of an automation system, including sensors, actuators, controllers, and communication networks. Discuss their roles in automated manufacturing processes.
  - Types of Automation: Explore different types of automation systems, such as fixed automation, programmable automation, and flexible automation. Discuss their applications in various industries.
  
2. Control Systems in Automation (400 words)
  - Principles of Control Systems: Provide an overview of control systems and their role in automation. Discuss feedback control, feedforward control, and open-loop control systems.
  - Types of Control Systems: Explore different types of control systems, including on-off control, proportional-integral-derivative (PID) control, and model predictive control (MPC). Discuss their advantages and limitations.
  - Control System Design: Discuss the design considerations and methodologies for developing control systems for automation applications. Highlight the importance of stability, robustness, and performance in control system design.
  
3. Industrial Automation Technologies (400 words)
  - Programmable Logic Controllers (PLCs): Introduce PLCs as the primary control devices used in industrial automation. Discuss their architecture, programming languages, and applications in manufacturing.
  - Supervisory Control and Data Acquisition (SCADA) Systems: Explain the role of SCADA systems in industrial automation for real-time monitoring, control, and data acquisition. Discuss their components and functionalities.
  - Distributed Control Systems (DCS): Discuss DCS architecture and applications in process industries such as oil and gas, chemical processing, and power generation. Explain the advantages of distributed control over centralized control.
  
4. Hands-on Activity: Automation System Design (400 words)
  - Designing Control Systems: Provide hands-on experience with designing control systems for automation applications. Allow participants to develop control logic using PLC programming software and simulate control system behavior.
  - SCADA System Configuration: Demonstrate how to configure SCADA systems for monitoring and controlling industrial processes. Allow participants to create HMI (Human-Machine Interface) screens and set up data acquisition points.

## Robotics Programming

1. Introduction to Robotics Programming (400 words)
  - Importance of Robotics Programming: Discuss the role of programming in enabling robots to perform tasks autonomously. Highlight the importance of programming languages, algorithms, and software development tools in robotics.
  - Programming Languages for Robotics: Explore programming languages commonly used in robotics, including C/C++, Python, MATLAB, and ROS (Robot Operating System). Discuss their advantages and suitability for different types of robotic applications.
  - Robot Operating Systems (ROS): Introduce ROS as a framework for building robotic software applications. Discuss its architecture, features, and capabilities for robot control, perception, and navigation.
2. Robot Motion Control (400 words)
  - Robot Kinematics and Dynamics Revisited: Review the concepts of robot kinematics and dynamics introduced on Day 1. Discuss how robot motion is controlled using kinematic and dynamic models.
  - Trajectory Planning: Explain the process of trajectory planning for robot motion control. Discuss techniques such as joint-space interpolation, Cartesian-space interpolation, and path planning algorithms.
  - Robot Control Interfaces: Introduce robot control interfaces such as joint control, Cartesian control, and force/torque control. Discuss how these interfaces are used to command robot motion and interact with the environment.
3. Robot Perception and Sensing (400 words)
  - Sensors in Robotics: Discuss the role of sensors in enabling robots to perceive and interact with the environment. Introduce sensors commonly used in robotics, such as cameras, LiDAR, ultrasonic sensors, and force/torque sensors.
  - Perception Algorithms: Discuss algorithms for robot perception, including image processing, object detection, feature extraction, and point cloud processing. Highlight the importance of sensor fusion and data fusion techniques.
  - Robot Localization and Mapping: Explain techniques for robot localization and mapping, such as simultaneous localization and mapping (SLAM). Discuss how robots use sensor data to build maps of their environment and localize themselves within the map.
4. 12. Hands-on Activity: Robotics Programming (400 words)
  - Robot Programming Basics: Provide hands-on experience with programming robots using a simulation environment or real hardware. Allow participants to write simple programs to control robot motion, interact with the environment, and perform basic tasks.
  - ROS Programming: Introduce ROS programming concepts and tools for developing robotic applications. Allow participants to create ROS nodes, publish and subscribe to topics, and integrate sensors and actuators with ROS.

## Advanced Robotics Topics

1. Robot Manipulation and Grasping (400 words)
  - Robot Manipulators: Discuss robot manipulators and their role in performing manipulation tasks such as picking, placing, and assembly. Introduce different types of robot end-effectors and grippers.
  - Grasping Strategies: Explore strategies for robot grasping, including geometric grasping, force-closure grasping, and dexterous manipulation. Discuss challenges and solutions in robotic grasping.
  - Object Recognition and Localization: Discuss techniques for object recognition and localization using computer vision and machine learning algorithms. Highlight the importance of accurate perception for successful grasping.
  
2. Mobile Robotics and Navigation (400 words)
  - Mobile Robot Platforms: Introduce mobile robot platforms such as wheeled robots, tracked robots, and legged robots. Discuss their advantages and limitations for different types of environments and applications.
  - Localization and Mapping Revisited: Review localization and mapping techniques introduced on Day 3. Discuss how mobile robots use these techniques to navigate and explore unknown environments.
  - Path Planning and Navigation: Explain techniques for path planning and navigation in mobile robotics, including potential field methods, grid-based methods, and sampling-based planners.
  
3. Robot Collaboration and Human-Robot Interaction (400 words)
  - Collaborative Robotics (Cobots): Introduce collaborative robots (cobots) and their role in human-robot collaboration. Discuss safety considerations, programming interfaces, and applications of cobots in industry.
  - Human-Robot Interaction (HRI): Explore principles of HRI and design considerations for creating intuitive and user-friendly robot interfaces. Discuss techniques for robot communication, gesture recognition, and behavior understanding.
  - Ethical and Social Implications of Robotics: Address ethical considerations and societal impacts of robotics technology, including job displacement, privacy concerns, and human-robot relationships.
  
4. Hands-on Activity: Advanced Robotics Applications (400 words)
  - Advanced Robotics Demonstrations: Showcase advanced robotics applications such as autonomous navigation, object manipulation, and human-robot collaboration. Allow participants to interact with advanced robotic systems and observe their capabilities.

- **Participant Projects:** Provide time for participants to work on individual or group projects that apply the concepts and techniques learned throughout the workshop. Encourage participants to develop innovative robotics applications and showcase their projects on the final day.

### **Robotics Project Showcase and Conclusion**

#### **1. Robotics Project Showcase (400 words)**

- **Participant Presentations:** Allow participants to present their robotics projects to the group. Each participant or group will have a designated time to showcase their project, demonstrate its functionality, and explain the underlying concepts and technologies.
- **Peer Feedback and Discussion:** Encourage peer feedback and discussion following each presentation. Participants can ask questions, provide constructive criticism, and offer suggestions for improvement.

#### **2. Conclusion and Reflection (400 words)**

- **Recap of Workshop Highlights:** Summarize key concepts, techniques, and technologies covered throughout the workshop. Highlight notable achievements and discoveries made by participants.
- **Reflection on Learning Experience:** Provide time for participants to reflect on their learning experience and share insights gained from the workshop. Discuss how participants can continue to explore robotics and automation beyond the workshop.
- **Closing Remarks and Certificate Distribution:** Conclude the workshop with closing remarks, thanking participants for their participation and contributions. Distribute certificates of completion to participants and acknowledge their commitment to learning and exploration in the field of robotics and automation.

By the end of the five-day workshop, participants will have gained a comprehensive understanding of robotics and automation, including fundamental concepts, programming techniques, advanced topics, and practical applications. They will be equipped with the knowledge and skills needed to design, program, and control robotic systems for a variety of industrial, commercial, and research applications. The hands-on activities, demonstrations, and project showcase will provide participants with valuable hands-on experience and opportunities to apply their learning in real-world contexts.



# **S.P.B. Patel Engineering College**

## **NOTICE**

**Date: 28th November 2022**

All Degree Engineering students are hereby informed that the Institute will organize a Soft Skills Course in December 2022.

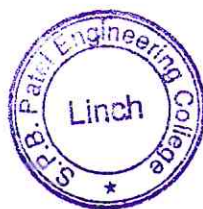
Interested students should provide their names to their respective departments.

*Resmee*

Principal

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2. NOTICE BOARD



December 2022

# Report on

Soft Skills for Engineers Course

Conducted by:

**S.P.B. Patel Engineering College**



**S.P.B. PATEL  
ENGINEERING COLLEGE**

SAFFRONY INSTITUTE OF TECHNOLOGY CAMPUS



## Report on "Soft Skills for Engineers Course"

S.P.B. Patel Engineering College

December 2022

### Overview:

In December 2022, S.P.B. Patel Engineering College conducted a five-day "Soft Skills for Engineers Course," which saw active participation from 114 students. Dr. Pooja Mehta led the course aimed to enhance students' soft skills, focusing on teamwork, leadership development, conflict resolution, negotiation, and their practical application in engineering settings.

### Course Highlights:

#### 1. Teamwork and Collaboration:

- Explored the importance of teamwork in engineering projects and workplaces.
- Identified characteristics of high-performing teams and various team roles and responsibilities.
- Introduced Tuckman's stages of group development and engaged participants in team-building activities.

#### 2. Leadership Development:

- Defined leadership and distinguished between leadership and management.
- Explored different leadership styles and qualities of effective leaders.
- Covered self-awareness, emotional intelligence, goal setting, visioning, time management, and prioritization.

#### 3. Conflict Resolution and Negotiation:

- Examined the nature of conflict, various conflict resolution styles, and a step-by-step resolution process.
- Defined negotiation and introduced the principled negotiation approach.
- Explored managing difficult conversations, assertiveness, and seeking win-win solutions.

#### 4. Applied Soft Skills:

- Analysed case studies of leadership challenges and engaged in role-playing leadership scenarios.
- Conducted negotiation simulations with debriefing and reflection sessions.
- Explored conflict resolution through case studies and role-playing exercises.

#### 5. Soft Skills Application and Integration:

- Discussed strategies for integrating soft skills into engineering practice.
- Facilitated reflection and goal-setting sessions for personal development planning.

- Concluded the workshop with reflections, a certificate presentation ceremony, and celebration.

### **Key takeaways:**

By the end of this course, students will have delved into and developed competency in the following skills:

- Teamwork Skills
- Leadership Development
- Conflict Resolution and Negotiation
- Applied Soft Skills
- Soft Skills Application
- Enhanced Communication Skills
- Effective Problem-Solving Techniques
- Motivation and Inspiration in Team Settings
- Delegation and Empowerment Strategies
- Time Management and Prioritization Techniques

### **Conclusion:**

The "Soft Skills for Engineers Course" provided a comprehensive understanding of essential soft skills, allowing participants to practice and apply these skills in simulated and real-world scenarios. The interactive nature of the course, including role-playing, case studies, and workshops, ensured participants left with enhanced capabilities and confidence to navigate teamwork, leadership, conflict resolution, and negotiation in their engineering careers.

The institute acknowledges the commitment and active participation of all 114 students, congratulating them on their completion of the soft skills training program.

**Photographs:**



## ATTENDANCE SHEET OF STUDENTS

**List of the students participated:**

Sr.No	BR_NAME	Enrolment number	Name
1	MECHANICAL ENGINEERING	200390119502	Jeet pratapbhai pomal
2	INFORMATION TECHNOLOGY	190390116039	PRAJAPATI YASH GANESHBHAI
3	INFORMATION TECHNOLOGY	190390116014	PATEL AKSHAYKUMAR PANKAJBHAI
4	COMPUTER ENGINEERING	190390107055	SIDDHPURA MILAN JAYESHBHAI
5	COMPUTER ENGINEERING	190390107032	PATEL DEV BIPINBHAI
6	MECHANICAL ENGINEERING	190390119013	SHARMA RONIT RAMNIWAS
7	MECHANICAL ENGINEERING	200390119503	DABHI JENISH PIYUSHBHAI
8	INFORMATION TECHNOLOGY	190390116028	PATEL RUTVIK RAJESHBHAI
9	COMPUTER ENGINEERING	190390107037	PATEL JAY ASHWINBHAI
10	CIVIL ENGINEERING	190390106001	GUPTA KUNAL RAKESHBHAI
11	MECHANICAL ENGINEERING	200390119506	Pratham Kirti Jain
12	INFORMATION TECHNOLOGY	190390116040	RAJPUT SHIVAM RAMKUMAR
13	INFORMATION TECHNOLOGY	190390116030	PATEL SUJAL KAMLESHBHAI
14	COMPUTER ENGINEERING	190390107038	PATEL JAYKUMAR DINESHBHAI
15	CIVIL ENGINEERING	190390106002	KALAVADIYA PRINCE PARESHBHAI
16	MECHANICAL ENGINEERING	190390119014	SUTHAR DHAVALKUMAR AMRABHAI
17	INFORMATION TECHNOLOGY	190390116033	PATHAK HARDIK SHASHIKANT
18	INFORMATION TECHNOLOGY	190390116036	PRAJAPATI PRATIK KAMLESHKUMAR
19	COMPUTER ENGINEERING	190390107002	CHAUDHARY DASHARATHBHAI TRIKAMABHAI
20	MECHANICAL ENGINEERING	190390119015	SUTHAR SHIVAM MUKESHKUMAR
21	MECHANICAL ENGINEERING	190390119016	SUTHAR SHUBHAM MUKESHKUMAR
22	COMPUTER ENGINEERING	190390107009	GOR KHUSHIBEN MINESHKUMAR
23	INFORMATION TECHNOLOGY	190390116035	PRAJAPATI KIRTAN RAJUBHAI
24	INFORMATION TECHNOLOGY	190390116034	PRAJAPATI DIXESH SHAILESHKUMAR
25	INFORMATION TECHNOLOGY	190390116037	PRAJAPATI SACHINKUMAR RAMESHBHAI
26	CIVIL ENGINEERING	190390106003	TAVIYA RAVINDRAKUMAR BHARATBHAI
27	INFORMATION TECHNOLOGY	190390116038	PRAJAPATI VAIDEHI AMITKUMAR
28	COMPUTER ENGINEERING	190390107044	PATEL SUHANIBEN ASHOKBHAI
29	COMPUTER ENGINEERING	190390107010	HANSALIA DEVKI PRAKASHBHAI
30	MECHANICAL ENGINEERING	200390119504	PATEL SMIT SURESHBHAI
31	COMPUTER ENGINEERING	190390107056	SUKHADIYA AAGAM PARESHBHAI
32	INFORMATION TECHNOLOGY	190390116017	PATEL DHYEY JITENDRAKUMAR
33	COMPUTER ENGINEERING	190390107034	PATEL DHARITRI MANVIRKUMAR
34	INFORMATION TECHNOLOGY	190390116046	SONI AYUSHI RAKESHKUMAR
35	CIVIL ENGINEERING	200390106502	Heenaba Nirubha Zala
36	COMPUTER ENGINEERING	190390107013	JASANI VITRAG MITESHBHAI
37	COMPUTER ENGINEERING	190390107047	PRADHAN SHANKHADEEP NITAI
38	INFORMATION TECHNOLOGY	190390116026	PATEL RAJ KAMLESHKUMAR



Sr.No	BR_NAME	Enrolment number	Name
39	INFORMATION TECHNOLOGY	190390116018	PATEL DIVYA MANOJKUMAR
40	CIVIL ENGINEERING	200390106503	MORKER ZEELKUMAR AJAYBHAI
41	COMPUTER ENGINEERING	190390107048	PRAJAPATI MIREN ASHOKKUMAR
42	COMPUTER ENGINEERING	190390107014	JOSHI CHIRAGKUMAR PRADIPBHAI
43	INFORMATION TECHNOLOGY	190390116027	PATEL RAXIT PANKAJBHAI
44	INFORMATION TECHNOLOGY	190390116031	PATEL VIMALKUMAR SHAILESHKUMAR
45	COMPUTER ENGINEERING	190390107043	PATEL SHREYASHKUMAR MAHENDRABHAI
46	COMPUTER ENGINEERING	190390107018	MANE HRUSHIKESH RAGHUNATH
47	COMPUTER ENGINEERING	190390107052	SAIYAD SHAHRUKH SADIK HUSEN
48	INFORMATION TECHNOLOGY	190390116023	PATEL LOVEKUMAR KANUBHAI
49	COMPUTER ENGINEERING	200390107502	GAJJAR SHRUTI RAJESH
50	COMPUTER ENGINEERING	190390107040	PATEL LAVKUMAR HEMANTBHAI
51	COMPUTER ENGINEERING	190390107020	SWAGATIKA MOHANTY
52	COMPUTER ENGINEERING	190390107054	SHAH NISHANT SANJAY
53	CIVIL ENGINEERING	200390106506	KHOKHANI AYUSH MEHULKUMAR
54	COMPUTER ENGINEERING	190390107041	PATEL NIRALI DINESHKUMAR
55	COMPUTER ENGINEERING	190390107017	LIMBACHIA JIMMY NIMESHBHAI
56	COMPUTER ENGINEERING	190390107051	RAVAL RUSHIKUMAR BHARATBHAI
57	INFORMATION TECHNOLOGY	190390116022	PATEL KYARI GIRISHKUMAR
58	CIVIL ENGINEERING	200390106504	PATEL PRACHIBEN SANJAYBHAI
59	COMPUTER ENGINEERING	190390107049	PRAJAPATI MITKUMAR KAMLESHBHAI
60	COMPUTER ENGINEERING	190390107015	KAMANI PREMALKUMAR ASHOKBHAI
61	INFORMATION TECHNOLOGY	190390116019	PATEL JAIMIN KIRITKUMAR
62	COMPUTER ENGINEERING	200390107505	Dave Manav Sanjay
63	COMPUTER ENGINEERING	190390107003	CHAUDHARY KHUVENDRASINGH SURENDRASINGH
64	COMPUTER ENGINEERING	190390107063	TIMBADIYA CHHAYA DINESHBHAI
65	COMPUTER ENGINEERING	190390107024	PATEL ABHIK DUSHYANTBHAI
66	MECHANICAL ENGINEERING	190390119002	BAROT SHASHANK RANJITBHAI
67	COMPUTER ENGINEERING	200390107511	Patel Mihir Vishnubhai
68	INFORMATION TECHNOLOGY	190390116043	SARAIYA YUKTA DIGESHKUMAR
69	COMPUTER ENGINEERING	190390107030	PATEL DEEP MUKESHBHAI
70	INFORMATION TECHNOLOGY	190390116012	NARSINGHANI HETAL GHANSHYAMBHAI
71	INFORMATION TECHNOLOGY	190390116001	BHATT SNEH RAHULBHAI
72	MECHANICAL ENGINEERING	190390119011	PRAJAPATI HARSHIT DHANJIBHAI
73	COMPUTER ENGINEERING	200390107509	PATEL JAIMEEN NIKUMBHAI
74	COMPUTER ENGINEERING	190390107008	GAJJAR HARSH ASHVINBHAI
75	INFORMATION TECHNOLOGY	190390116010	MANAVADARIYA NIVEDI HASMUKHBHAI
76	COMPUTER ENGINEERING	190390107066	VEKARIYA AGNESH RAMESHBHAI
77	COMPUTER ENGINEERING	190390107027	PATEL BHARGAVKUMAR SHAILESHBHAI
78	COMPUTER ENGINEERING	190390107067	YADAV SATYAM NISHA YADAV
79	MECHANICAL ENGINEERING	190390119010	PATEL NIMABEN ANILBHAI
80	COMPUTER ENGINEERING	200390107504	Dhruvi Patel





Sr.No	BR_NAME	Enrolment number	Name
81	INFORMATION TECHNOLOGY	190390116004	GANDHI KAUSHAL KANUBHAI
82	COMPUTER ENGINEERING	190390107060	THAKKAR VIBHA MAHESHKUMAR
83	COMPUTER ENGINEERING	190390107022	PANSURIYA PARASKUMAR SURESHBHA
84	INFORMATION TECHNOLOGY	190390116048	THAKKAR JAY NILESHBHA
85	CIVIL ENGINEERING	200390106505	NINAMA NAYNABEN RAMESHBHA
86	INFORMATION TECHNOLOGY	190390116044	SAVALIYA HARSH FALGUNBHA
87	COMPUTER ENGINEERING	190390107016	KANJARIYA PRADIP ASHOKBHA
88	COMPUTER ENGINEERING	190390107050	PRAJAPATI RIYA PINKESHKUMAR
89	INFORMATION TECHNOLOGY	190390116020	PATEL KEVALKUMAR MANOJBHA
90	COMPUTER ENGINEERING	200390107508	DIWAN SUJANBANU IMRANSHA
91	COMPUTER ENGINEERING	190390107007	DAVE SOHAM VIJAYKUMAR
92	INFORMATION TECHNOLOGY	190390116008	KHATRI SAGAR NIKUNJBHA
93	COMPUTER ENGINEERING	190390107065	VARIYA ABHIRAJ SHIRISHBHA
94	COMPUTER ENGINEERING	190390107026	PATEL ARYAN BAKULESH
95	COMPUTER ENGINEERING	190390107021	OZA PARTH RAJESHBHA
96	COMPUTER ENGINEERING	200390107501	Patel Dhruv Dhanpalbhai
97	COMPUTER ENGINEERING	190390107019	MANSURI AAYESHA ILYASBHA
98	COMPUTER ENGINEERING	190390107053	SHAH NIR DILIPBHA
99	COMPUTER ENGINEERING	200390107507	CHAUHAN SHIVANIBEN SUNILKUMAR
100	COMPUTER ENGINEERING	190390107006	CHOVATIYA VISHAL DHARMENDRABHA
101	COMPUTER ENGINEERING	190390107025	PATEL ABHISHEK MAHESHBHA
102	INFORMATION TECHNOLOGY	190390116007	KATAVA MAHAMMADTAUKIR MAHAMMADIQBAL
103	COMPUTER ENGINEERING	190390107064	TRIVEDI MAITRI HIRENBHA
104	MECHANICAL ENGINEERING	190390119003	BHUVA GAURANG KUMAR JAYESHBHA
105	CIVIL ENGINEERING	200390106501	MIHIR MODHA
106	COMPUTER ENGINEERING	190390107046	PATHAN FIZABANU YUSUFMIYA
107	COMPUTER ENGINEERING	190390107012	JAIN KAJAL MANOJKUMAR
108	INFORMATION TECHNOLOGY	190390116025	PATEL RAJ ARVINDBHA
109	MECHANICAL ENGINEERING	200390119501	BHATT NISHYANK PRANTHESH
110	INFORMATION TECHNOLOGY	190390116041	RATHOD RAKESHKUMAR BHARATJI
111	COMPUTER ENGINEERING	190390107031	PATEL DEV BHUPENDRABHA
112	INFORMATION TECHNOLOGY	190390116013	PAL HITESHKUMAR KAMLESHBHA
113	INFORMATION TECHNOLOGY	190390116002	BHIMANI NIPESH RAVILALBHA
114	MECHANICAL ENGINEERING	190390119012	SENGAL BHAUMIKKUMAR RAMESHBHA

*(Handwritten Signature)*

